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**Table S1.** Regional location, site name, island/locality and coordinates and survey area for 16 survey locations in Washington, USA.

Region	#	Site	Locality	Latitude (°N)	Longitude (°W)	Survey area (m <sup>2</sup> )
San Juan Islands (SJI)	1	Colin's Cove	San Juan	48.5496003	-123.0058828	297
	2	Crescent Beach	Orcas	48.69110779	-122.8998859	361
	3	Eastsound Waterfront	Orcas	48.69411945	-122.9077676	258
	4	Lonesome Cove	San Juan	48.62106404	-123.1125499	4139
	5	Pile Point	San Juan	48.48236771	-123.0888851	1118
	6	Point Caution	San Juan	48.56198455	-123.0174311	442
	7	Reuben Tarte	San Juan	48.61217486	-123.0981535	1154
	8	Richardson	Lopez	48.44687	-122.89988	621
	9	Rosario	Orcas	48.64418252	-122.8727728	616
	10	Strathmann's Beach	San Juan	48.56311706	-123.0251518	25
	11	Yellow Island	San Juan Channel	48.59306207	-123.0322087	335
South Puget Sound (SPS)	12	Ruston Way	Tacoma	47.294980822	-122.497940865	300
	13	Hyde	Tacoma	47.27560545	-122.4612332	300
	14	Point Defiance	Tacoma	47.30660093	-122.515690989	1026
	15	Titlow Beach	Tacoma	47.25322675	-122.5529986	837
Outer Washington Coast	16	Starfish Point	Olympic National Park	47.652583	-124.3919835	52

## ***Sea surface temperature anomaly- calculations for figure 2***

### ***Methods***

The climatology used for the new NOAA Coral Reef Watch (CRW) 5-km Geo-Polar Blended Night-only products was produced using night-only values from 1985-2012 from the NOAA Pathfinder Version 5.2 sea surface temperature (SST) data set (a U.S. official climate data record). 12 monthly mean climatologies were produced for the 28-year period and the monthly means were used as the baseline from which we calculated anomalies. The 5-km climatological average values were bias-adjusted to match 5-km SST data available from CRW for the study period. Anomalies were calculated by comparing daily 5-km SST data to the bias-adjusted monthly mean values. The anomaly values shown are the average anomaly calculated for June, July and August, 2014. The anomaly data are useful for viewing large-scale regional patterns in sea temperature anomalies during the study period. However, the data resolution of 5-km is too coarse for use in statistical analyses comparing disease among our intertidal survey sites.

### ***Results***

Of the three areas surveyed within the region, average SST anomalies for June-August, 2014 were greatest and in the San Juan Islands. Average anomalies also approached or exceeded 2 °C on the outer WA coast. However, average anomalies >2 °C and even 3 °C were sustained through the summer months of 2014 (June-August) within the San Juan Islands (figure 2).